Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1-10. (Canceled)

11. (Previously Presented). A liquid crystal electro-optical device comprising:

a pair of substrates, at least one of said pair of substrates being transparent;

a light modulating layer interposed between the pair of substrates, said light modulating layer including a liquid crystal, an optically active substance, and a dichroic dye; and

electrodes for applying an electric field in a direction parallel with the pair of substrates,

wherein a cell thickness d between the pair of substrates is in a range of $1\mu m<d<10\mu m$.

12. (Previously Presented). A method of driving a liquid crystal electro-optical device, said liquid crystal electro-optical device comprising:

a pair of substrates, at least one of said pair of substrates being transparent; and

a light modulating layer interposed between the pair of substrates, said light modulating layer including a liquid crystal, an optically active substance, and a dichroic dye, wherein a cell thickness d between the pair of substrates is in a range of $1\mu m<d<10\mu m$,

said method comprising:

applying an electric field in a direction parallel with the pair of substrates.

13. (Previously Presented). A liquid crystal electro-optical device comprising:

a pair of substrates, at least one of said pair of substrates being transparent;

a light modulating layer interposed between the pair of substrates, said light modulating layer including liquid crystal molecules, an optically active substance, and dichroic dye molecules; and

electrodes for applying an electric field in a direction parallel with the pair of substrates,

wherein a cell thickness d between the pair of substrates is in a range of $1\mu m<d<10\mu m$, and

wherein the liquid crystal molecules and the dichroic dye molecules are aligned in the direction parallel with the substrates by the electric field to obtain a light transmission state.

14. (Previously Presented). A display according to claim 13, wherein the dichroic dye molecules are oriented in different directions around the axis that is perpendicular to the substrates to attain a dark state when the electric field is not applied.

15. (Previously Presented). A method of driving a liquid crystal electro-optical device, said liquid crystal electro-optical device comprising:

a pair of substrates, at least one of said pair of substrates being transparent; and

a light modulating layer interposed between the pair of substrates, said light modulating layer including liquid crystal molecules, an optically active substance, and dichroic dye molecules, wherein a cell thickness d between the pair of substrates is in a range of $1\mu m<d<10\mu m$,

said method comprising:

applying an electric field in a direction parallel with the pair of substrates;

wherein the liquid crystal molecules and the dichroic dye molecules are aligned in the direction parallel with the substrates by the electric field to obtain a light transmission state.

16. (Previously Presented). A method of driving a liquid crystal electro-optical display according to claim 15, wherein said dichroic dye molecules are oriented in different directions

around the axis that is perpendicular to the substrates to attain a dark state when the electric field is not applied.

17. (Previously Presented). A display according to claim 11, wherein the liquid crystal has a spiral pitch p in a range of $1\mu m<p<15\mu m$.

18. (Previously Presented). A method of driving a liquid crystal electro-optical display according to claim 12, wherein the liquid crystal has a spiral pitch p in a range of $1\mu m<p<15\mu m$.

19. (Previously Presented). A display according to claim 13, wherein the liquid crystal molecules have a spiral pitch p in a range of $1\mu m<p<15\mu m$.

20. (Previously Presented). A method of driving a liquid crystal electro-optical display according to claim 15, wherein the liquid crystal molecules have a spiral pitch p in a range of $1\mu m<p<15\mu m$.

21. (Previously Presented). A display according to claim 11, wherein the liquid crystal has an orientation twist angle θ in a range of $\theta \leq 300°$.

22. (Previously Presented). A method of driving a liquid crystal electro-optical display according to claim 12, wherein the liquid crystal has an orientation twist angle θ in a range of $\theta \leq 300°$.

23. (Previously Presented). A display according to claim 13, wherein the liquid crystal molecules have an orientation twist angle θ in a range of $\theta \leq 300°$.

24. (Previously Presented). A method of driving a liquid crystal electro-optical display according to claim 15, wherein the liquid crystal molecules have an orientation twist angle θ in a range of $\theta \leq 300°$.

25. (New) A liquid crystal electro-optical display according to claim 11, wherein the liquid crystal electro-optical device comprises no polarizing plate.

26. (New) A method of driving a liquid crystal electro-optical device according to claim 12, wherein the liquid crystal electro-optical device comprises no polarizing plate.

27. (New) A liquid crystal electro-optical display according to claim 13, wherein the liquid crystal electro-optical device comprises no polarizing plate.

28. (New) A method of driving a liquid crystal electro-optical device according to claim 15, wherein the liquid crystal electro-optical device comprises no polarizing plate.